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MONDAY, MAY 10TH, 1852.

JAMES APJOHN, M. D., VICE-PRESIDENT,
in the Chair.

ARTHUR LEARED, M. B., was elected a Member of the Academy.

It was Resolved, on the recommendation of the Council:—

That a sum not exceeding £50 be placed at the disposal of the Committee appointed to prepare a Catalogue of the Museum.

The Secretary presented, for Major John Bonner, a bronze pin, found with a quantity of human bones, on the lands of Henry Gillespie, Esq., near Rathfarnham; for R. M. Carnegie, Esq., a copper hatchet-head; and for Pakenham Mahon, Esq., a circular impression on wood, produced, apparently, by a red-hot iron stamp, found in Clonfinn Lough.

The Secretary exhibited, for John Moorehead, M. D., a portion of the horn of an Irish elk, found under four feet of peat and five feet of blue clay, in the Public Drainage Works at Annagh-na-Carrig, Newbliss, County Monaghan, by Mr. Coe, Civil Engineer. Dr. Moorehead was satisfied, from inquiries made by himself, that the fragment of horn was now in the same state in which it was when disinterred, yet its surface contains various marks made with a knife, together with the letters J and E in Roman characters.

Rev. H. Lloyd exhibited a number of autograph letters, the property of — Lynch, Esq., by Lord Lyttleton, Lord Chesterfield, the Duke of Northumberland (1766), Alexander Pope, Dean Swift, Esq., and Sir Humphrey Davy (1811).

Mr. Grubb communicated to the Academy an improvement lately effected by him in the mode of illuminating objects under examination in the compound microscope.

After noticing the several improvements which have been made within the last few years in the *optical* part of this instrument, Mr. Grubb remarked, that its *mechanical* arrangements have not undergone corresponding improvements, and are still defective in some important respects. Among these, Mr. Grubb noticed the power of directing the illuminating beam on the object at all angles of incidence and in all azimuths, and of registering the position at which peculiar effects are obtained. He referred to the very ingenious method proposed by his friend, Mr. Thomas F. Bergin, for remedying in part this defect, and which consisted in the employment of a combination of a rhombic prism with Mr. Shadbolt's parabolic reflector. By means of this arrangement Mr. Bergin was able to direct upon the object a beam of light at *one fixed* angle of oblique incidence, but in *all* azimuths. Mr. Grubb then proceeded to describe his improvement, which gives the power of directing the beam at *any* angle of incidence and in *any* azimuth, and also enables the operator to register its position at any time, and consequently to restore it with perfect certainty.

"I assume," said Mr. Grubb, "the existence of an illuminating beam, achromatized and adjustable as to the angle of convergence, the shape of its section, and the position of its focus, and I seek to effect the objects described above, *first*, by moving this beam in a plane passing through the optical axis round the focus of the instrument as its centre, and, *secondly*, by rotating the object itself in a plane perpendicular to that axis round the same point. As the optical axis in the instrument I use is vertical, these planes are respectively vertical and horizontal.

"I have fulfilled the first condition by mounting a suitable illuminator on a vertical circular sector (nearly a complete circumference) concentric with the focus; this part of the ar-

rangement enables me to throw the beam on the object at all angles of incidence, whether from beneath, as in the case of translucent, or from above, in the case of opaque objects, and as the sector is graduated, I have the power of observing and restoring any position at pleasure.

“To fulfil the second condition, the stage of the microscope is made to revolve round the optical axis, and in a plane perpendicular to it. This is effected by constructing the stage on entirely a new plan, in which the slow motions are obtained from concentric rings forming a part of the stage itself, and equally available in every position of the latter. By this arrangement the beam of light may be thrown on an object in any azimuth, and a suitable graduation of the stage enables the observer to register and restore its position at any time.

“Hereafter,” continued Mr. Grubb, “I hope to lay before the Academy some of the results obtained by the use of these arrangements; at present I shall conclude by observing that they are of a highly interesting character, and likely to lead to important discoveries.”

Dr. Allman presented to the Academy the results of some unfinished observations he is at present engaged in on the Claviform and Sertularian Zoophytes. He has found that the medusoid structure, hitherto supposed to be confined to the free locomotive gemmæ of these animals, exists also in the fixed ovisacs, though generally so far disguised as to render it easily overlooked. This structure he has found in *Coryne*, *Synco-ryne*, *Tubularia*, *Cordylophora*, and *Sertularia*; and he believed himself justified in generalizing the observed facts into the proposition that a medusoid structure in some form is necessary in these zoophytes for the production of true ova.